Great Lakes Salmon & Trout Stamp Revenue Expenditures Fiscal Years 2002-2005

33.6 pound brown trout caught in Lake Michigan out of Milwaukee.
Photo by Eric Haataja

Administrative Report 57
By John G. Puls

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DEPT. OF NATURAL RESOURCES

Wisconsin Department of Natural Resources
Bureau of Fisheries Management & Habitat Protection
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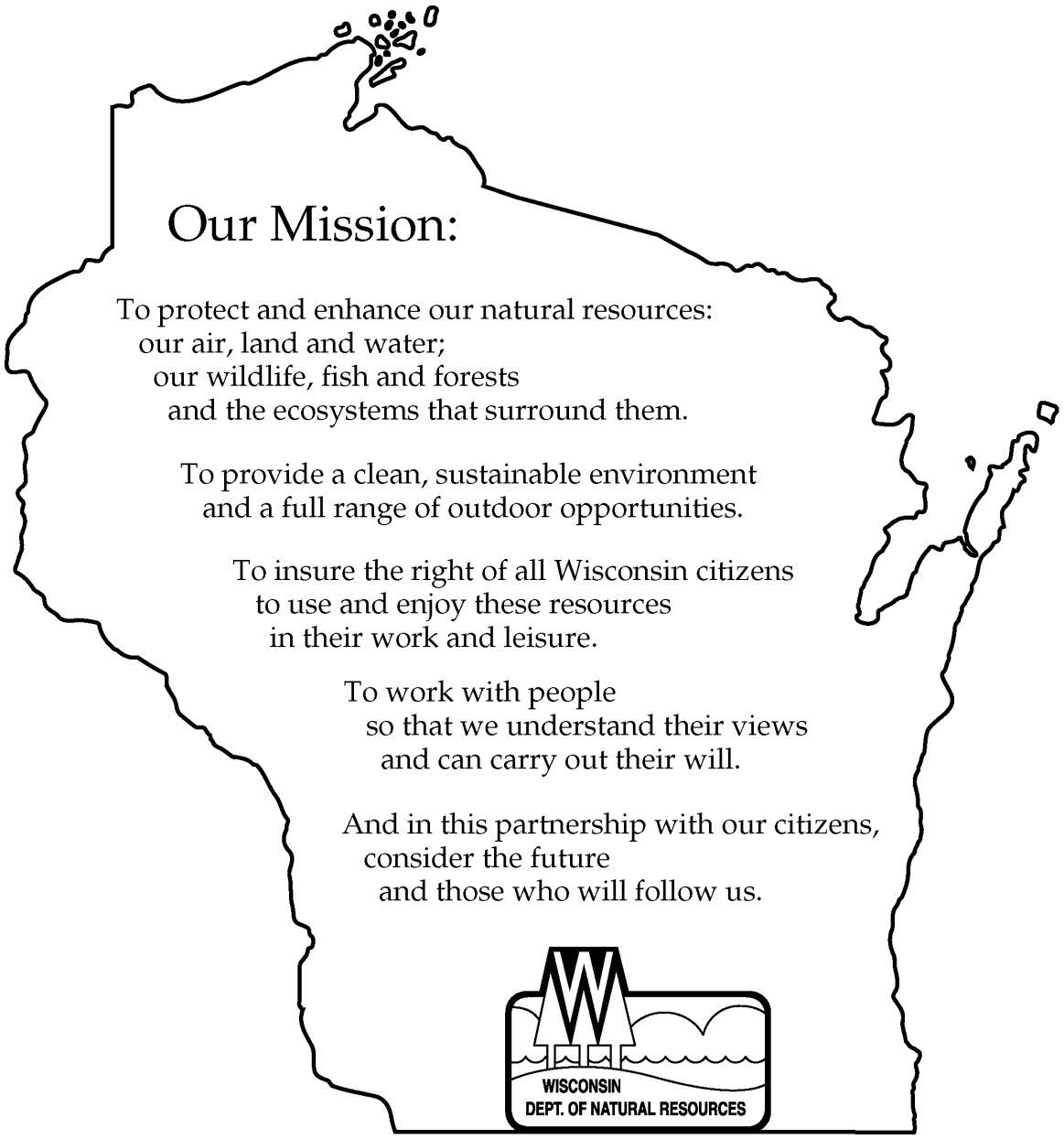

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Great Lakes

Salmon & Trout

Stamp Revenue Expenditures

Fiscal Years 2002-2005

Administrative Report 57

By John G. Puls

Salmon Stamp Program Benefits

The Great Lakes Salmon and Trout Stamp has enabled the DNR to maintain and further develop the salmon and trout fisheries in Lakes Michigan and Superior and their tributaries and in doing so enhance the economies of many coastal cities.

Since 1983, Salmon Stamp funds have:

✓ Provided over $1.6 million for physical plant improvements at state hatcheries producing salmon and trout for the Great Lakes, including a new water supply line at the Bayfield Hatchery which produces over 700,000 trout and salmon annually.

✓ Paid to produce and stock over 95 million coho and chinook salmon, brook & brown trout, splake and steelhead.

Records
Chinook salmon - 44 lbs. 15 oz. 1994
Coho salmon - 26 lbs. 2 oz. 1999
Steelhead - 27 lbs. 2 oz. 1997
Brown trout - 35 lbs. 1.9 oz. 1996
Brook trout – 10 lbs. 1 oz. 1999

✓ Allowed fish health personnel to work with other states to develop a preventative thiamine (vitamin B_1) treatment to control Early Mortality Syndrome (a condition resulting in massive losses of fry shortly after hatching).

✓ Paid for annual creel surveys that give Wisconsin the best data on salmon and trout harvest and catch rates in the entire Great Lakes region.

✓ Assisted in the development and operation of the Bois Brule River Lamprey Barrier, the Root River Steelhead Facility, the C.D. "Buzz" Besadny Anadromous Fisheries Facility, and the Strawberry Creek Weir. The Bois Brule River Lamprey Barrier provides an effective, non-chemical sea lamprey control method. The other facilities enhance stocking efforts by collecting eggs from feral salmon and trout. These facilities also collect essential data on fish returns, as all salmon and trout passing through the facilities can be counted.

✓ Aided by an increase in the annual fee (from $7.00 to $10.00 starting in 2004) Salmon Stamp revenues will make a major contribution to the renovation of Wild Rose State Fish Hatchery over the next few years. See page 27 of this report.

Sport Fish Restoration Funds also support some projects described in this report

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Reader's Guide

This report summarizes expenditures for the Great Lakes salmon and trout fisheries program. It includes planned expenditures of Salmon Stamp (SS) revenues for fiscal years 2002, 2003, 2004 and 2005 as well as the total actual expenditures, from all sources, for fiscal years 2002 and 2003. (The fiscal year runs from July 1 of one year through June 30 of the next.) In most cases, actual expenditures exceed Salmon Stamp contributions since other fisheries revenues (state and federal) also support this program. Expenditures are presented by project. Each project is categorized as Lake Michigan evaluation and research activities; Lake Superior evaluation and research activities; propagation activities (including physical facilities developments); or Great Lakes Salmon & Trout Stamp program administration (the cost of producing the Salmon Stamp and this report).

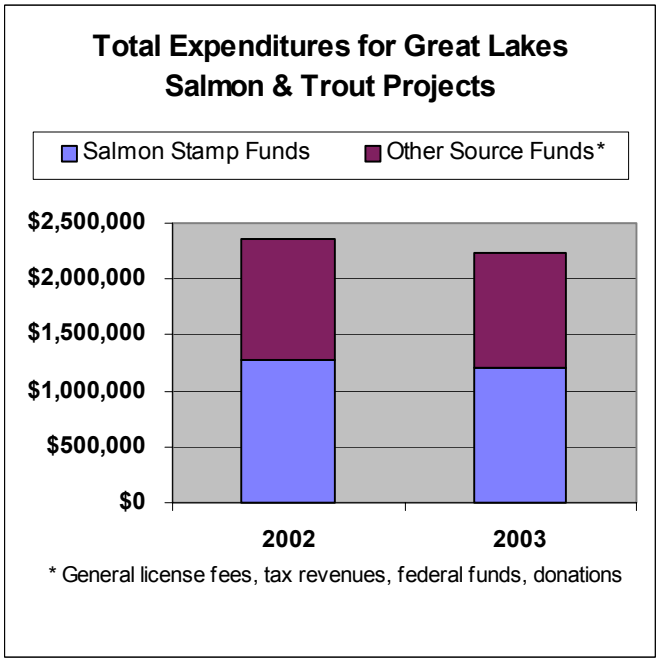
Expenditures associated with travel, special services, supplies, program overhead, limited term employee (LTE) salaries and a few permanent salaries that are directly funded by SS funds are summarized in Tables 1 and 2, and then presented for individual projects in the body of the report. In the project summaries expenditures are presented in three numbers for each fiscal year. "Budgeted SS Expenditures" includes only costs of supplies and LTE salaries. "Actual SS Expenditures" includes not only those costs, but also Salmon Stamp-funded permanent salaries, fringe benefits, and program overhead. "Total Expenditures (all funding sources)" includes Salmon Stamp expenditures as well as expenditures from other funding sources (primarily fishing license sales) supporting these programs.

Table 1 Great Lakes Salmon & Trout Stamp program expenditures in fiscal years 2002-2005.

	FY 02	FY 03	FY 04	FY 05
Planned Salmon Stamp Expenditures				
Evaluation and Research Activities				
Lake Michigan				
Projects (LTE salaries, supplies, overhead)	$214,890	$200,849	$169,436	$171,765
Permanent Salaries	$73,009	$74,468	$65,772	$66,429
Lake Superior				
Projects (LTE salaries, supplies, overhead)	$110,220	$110,220	$71,425	$70,670
Permanent Salaries	$55,669	$57,105	$55,669	$55,738
Propagation Activities				
Projects (LTE salaries, supplies, overhead)	$656,044	$636,095	$641,975	$636,621
Wild Rose Fish Hatchery Renovation	$0	$0	$600,000	$600,000
Permanent Salaries	$31,047	$31,668	$30,801	$31,109
Program Administration	$13,200	$6,000	$6,000	$2,500
Fringe Benefits	$122,012	$123,506	$109,941	$109,986
Total planned Salmon Stamp expenditures	$1,276,091	$1,239,911	$1,751,019	$1,734,818
Actual Expenditures				
Salmon Stamp expenditures	$1,270,341	$1,210,678	N/A	N/A
Expenditures from all funding sources	$2,349,948	$2,235,194	N/A	N/A

Table 2 Annual Great Lakes Salmon and Trout Stamp account activities, fiscal years 2002-2005.

	FY 02 Actual	FY 03 Actual	FY 04 Planned	FY 05 Planned
Beginning cash balance	$493,801	$413,461	$424,407	$198,428
Revenues	$1,190,001	$1,221,624	$1,525,040	$1,671,521
Total available funds	$1,683,802	$1,635,085	$1,949,447	$1,869,949
Total expenditures	$1,270,341	$1,210,678	$1,751,019	$1,734,818
Cash balance	$413,461	$424,407	$198,428	$135,131



Lake Michigan Evaluation and Research Activities

Assessment of Seeforellen Brown Trout Strain

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$3,400	$3,400	$1,718	$1,700
Actual Salmon Stamp Expenditures	$986	$4,163	N/A	N/A
Total Expenditures (all funding sources)	$1,757	$6,022	N/A	N/A

Contact: Justine Hasz, Fisheries Biologist, Peshtigo

This project supports field activities and data collection related to seeforellen strain brown trout in the Menominee River. It complements and supports fish production work at the Wild Rose Hatchery (see p 23)

During the fall of 2002 shocking activities to collect seeforellen brown trout were carried out on the lower Menomonee River and produced a total of 114 brown trout - 36 male and 78 female. In 2003 four electroshocking trips were made to the Menomonee River and a total of 41 seeforellen brown trout were collected - 27 females and 14 males. The size of the fish captured ranged from 22.5 inches to 34.5 inches. All fish were transported to the Wild Rose Fish Hatchery for spawning and returned to the Menomonee River after they had been spawned.

Lake Michigan Creel Survey

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$106,000	$106,000	$96,013	$98,615
Actual Salmon Stamp Expenditures	$95,664	$116,901	N/A	N/A
Total Expenditures (all funding sources)	$170,454	$169,076	N/A	N/A

Contact: Brad Eggold, Fisheries Supervisor, Milwaukee

Creel surveys of anglers at boat landings are conducted annually from mid March through October in all Lake Michigan counties to monitor the sport harvest of salmon and trout. When combined with information about the commercial and charter harvests, the creel data helps to estimate fishing pressure, population size, and harvest rates, and to develop stocking strategies and decide how to best manage the Lake Michigan fishery. Anglers and boat trailers are counted at all Lake Michigan locations. Biologists also interview anglers and collect biological data from harvested fish. A moored boat survey completed in 2002 and 2003 was designed to collect fishing information from owners of boats moored on Lake Michigan and Green Bay. In 2003 a total of 464,453 salmon and trout were estimated to have been harvested in the Wisconsin waters of Lake Michigan and Green Bay including 317,619 chinook salmon, 50,625 coho salmon, 48,548 rainbow trout, 23,881 lake trout, 23,654 brown trout and 126 brook trout. The chinook salmon harvest was the third highest ever recorded in Wisconsin. Outdoor reports are prepared twice per week from March through December. These reports are put on a fishing hot line, sent to Madison for the Outdoor Report, and included on the DNR Web site.

Record Lake Trout 38 lbs. 9 oz. Lake Michigan 1991
Record Chinook Salmon 44 lbs. 15 oz. Door County 1994

Analysis of Lake Michigan Sport Fishery & Creel Surveys

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$16,150	$16,150	$14,150	$14,000
Actual Salmon Stamp Expenditures	$23,949	$25,726	N/A	N/A
Total Expenditures (all funding sources)	$42,672	$37,208	N/A	N/A

Contact: Brad Eggold, Fisheries Supervisor, Milwaukee

This project helps ensure that the Lake Michigan sport fishery operates optimally, based on survey data from moored boats and charter captains, and from Lake Michigan creel surveys. The data helps to estimate fishing effort, catch rates, species composition and size of fish harvested. Data are also used to evaluate the effectiveness of stocking strategies and to guide the geographic distribution of stocking. The creel survey is continuously evaluated so maximum effort is directed at sites and times anglers are present. The yellow perch component of the fishery is also analyzed to help provide recommendations on current seasons and bag limits.

This project assists in evaluating salmon and trout rearing and stocking practices. The effects of regulation changes and the population dynamics of Lake Michigan are also closely monitored. A variety of data is shared with governmental agencies and universities doing research including the Great Lakes Fisheries Commission, USFWS sea lamprey control program, and university-based scientists. Long-term summaries of perch and salmonid fishing effort and harvest are updated. Additional summaries are prepared on creel and charter data for special purposes. For example, 16 years of boat effort were compiled to look at potential impacts of commercial fishing rule-changes, multiple data-sources were analyzed to investigate declining steelhead returns, and brood-river data were explored for interactions among salmonid species.

Lake Trout Restoration & Management

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$19,624	$19,624	$10,511	$10,400
Actual Salmon Stamp Expenditures	$57,355	$71,466	N/A	N/A
Total Expenditures (all funding sources)	$102,186	$103,363	N/A	N/A

Contact: Mike Toneys, Lake Michigan Subteam Leader, Sturgeon Bay

The lake trout restoration and management program focuses on four main program segments:

-determine amount and trends of sea lamprey wounding and scarring
-assess build-up of mature spawning lake trout in the mid-lake reef complex
-conduct spring lake-wide survey
-assess survival and growth rates of lake trout stocked at 10 versus 20 per pound (study completed)

As part of Wisconsin's lake trout restoration and management program, an assessment to determine the amount of lamprey wounding and scarring on lake trout near Sturgeon Bay, Milwaukee and in the mid-lake reef complex is conducted annually with the Research Vessel Barney Devine. Long term trends indicate that wounding/scarring in Wisconsin waters remains low in southern Lake Michigan, most likely the result of a lack of useable spawning streams. The north has seen an upward trend in wounding and scarring in recent years, which is primarily due to large production of lamprey in the Manistique River in Upper Michigan.

The fall lake trout assessment was also conducted off Milwaukee and the mid-lake reef complex in 2002 and 2003. The experiment to determine which strains are best adapted to life and reproduction in this area so far has revealed that in southern Lake Michigan, before age 3, the Marquette strain from Lake Superior survived better than the Seneca strain from the New York Finger Lakes region. After age 3 survival was similar for both strains as was growth. At the end of 2003, DNR staff determined that sexually mature lake trout from ages 7 (age of full maturity) to 20 utilize the mid-lake reef complex and consist entirely of stocked fish. The

2003 populations on some reefs are probably as abundant now, if not more so, than historical natural populations.

In addition, DNR personnel cooperated with early life history investigations of the mid-lake reef complex being conducted jointly with the UW-Milwaukee Great Lakes Water Institute and the University of Michigan. The study will help to determine where lake trout eggs are being deposited, the amount of egg predation, evidence of hatching and which strains are reproducing successfully. Burbot stomachs were collected by DNR staff on the East reef for Dr. John Janssen, UW- Milwaukee, as part of the lake trout early life history study. Lake trout eggs were found in the stomachs of some of the sculpin that were found in the stomachs of some of the burbot, helping to prove eggs were being deposited there. Lake trout tissue samples were provided to Dr. Ruth Philips at the University of Washington as part of her study comparing the disease resistance of lake trout strains stocked into Lake Michigan using genetic markers. Samples of fish have been provided upon request in the past to other researchers nation-wide for special studies.

The objective of the spring lake-wide survey, jointly conducted by state, federal and tribal agencies, is to establish trends in relative abundance, survival, growth, diet and general health of lake trout and chinook salmon. This annual survey will help detect the early signs of problems in an effort to help avert a catastrophic decline, like the chinook die-off in the late 1980s. The Wisconsin portion of lake-wide assessment was conducted in spring 2003 off Sturgeon Bay and Sheboygan, and on the East reef in the mid-lake reef complex. Wisconsin's recently completed investigation of lake trout size-at-stocking (10 versus 20 per pound) conducted in the Clay Banks area has shown no difference in survival or growth between the two sizes of lake trout yearlings stocked.

Fisheries staff from Wisconsin joined those from other agencies around Lake Michigan to critically examine lake trout rehabilitation efforts and begin producing a revised lake trout management plan. A new Web based database entry system for Lake Michigan fish data was established. Data collected in 2003 was entered into this new database and the transfer of historical lake trout data was started. Updates on the lake-wide efforts to restore lake trout in Lake Michigan can be viewed on the Great Lakes Fishery Commission Web page (http://www.glfc.org).

Salmon & Trout Broodstock Management & Evaluation

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$57,016	$50,175	$43,002	$38,550
Actual Salmon Stamp Expenditures	$67,070	$46,657	N/A	N/A
Total Expenditures (all funding sources)	$95,249	$59,474	N/A	N/A

Contact: Brad Eggold, Fisheries Supervisor, Milwaukee - coho, chinook and steelhead management at the Root River Steelhead Facility
Steve Hogler, Fisheries Biologist, Mishicot - steelhead management at Besadny Anadromous Fisheries Facility
Paul Peeters, Fisheries Biologist, Sturgeon Bay - coho and chinook management at Besadny and Strawberry Creek Facilities

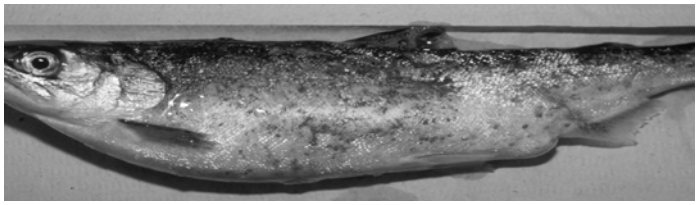
Each year salmon and trout are stocked in many Lake Michigan locations. Those stocked in Strawberry Creek, the Kewaunee River, and the Root River provide the basis for continuation of the salmon and trout program in Lake Michigan. When fish return to those rivers as adults to spawn, eggs are collected and fertilized for the hatcheries to raise. This project is an assessment of biological characteristics of the stocked fingerlings, yearlings, and the mature adults. Annual data collected includes: length, weight, age, sex, and fin clip. Various lots of chinook, coho and steelhead are marked with fin clips or tags prior to stocking to evaluate the performance of different strains or to assess alternative rearing strategies and disease treatments. Long-term trends indicate whether the desired characteristics of size, health, time of spawning run and survival are achieved.

Mature chinook salmon return to the Strawberry Creek Weir, Wisconsin's primary chinook egg collection facility. Since 1981 the average total weight of chinook returning to the SCW has been 67,819 pounds, with an average of slightly over 4 million eggs harvested for hatchery production.

The Strawberry Creek Weir (SCW) is the primary site for the collection of mature chinook salmon. The C. D. "Buzz" Besadny Anadromous Fisheries Facility (BAFF), on the Kewaunee River, is used to assess the return of three steelhead strains, collect adult coho salmon, and serves as a backup facility for collection of chinook salmon. The Root River Steelhead Facility is used for spawning adult coho salmon and steelhead collection, and serves as a backup facility for capture of mature chinook salmon. When mature fish return to the three brood rivers to spawn, eggs are collected and fertilized for the hatcheries to raise. At SCW and BAFF, surplus eggs and eggs unsuitable for hatchery production are sold under contract to a bait dealer with the proceeds returned to the Wisconsin general fund.

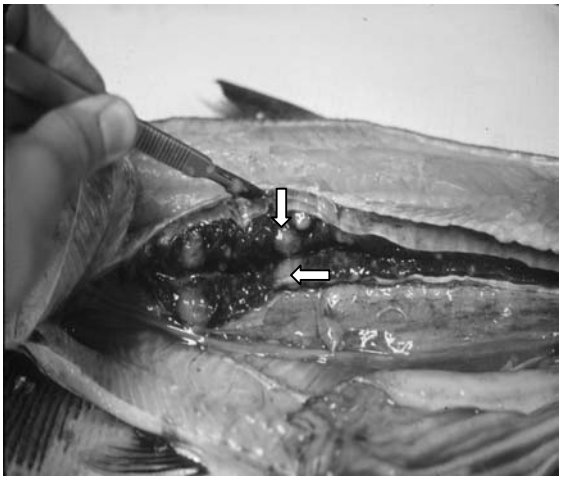
Because of the importance of adequate forage, we participate in inter-jurisdictional cooperative studies of the abundance of alewife, smelt, and chubs using acoustical equipment mounted on the Research Vessel Barney Devine and the Research Vessel Perca. Data are provided to USGS to assist in producing a lake-wide forage estimate.

Health assessments are performed on coho, chinook and steelhead brood fish to detect early signs of disease and to provide base line data on basic health. DNR staff are also able to conduct special health studies. As part of a special study on Bacterial Kidney Disease (BKD), sixty pairs of chinook salmon were spawned at the Root River Steelhead Facility. Fertile eggs from females and males that tested negative for BKD were shipped to the Western Fisheries Research Center in Seattle, Washington where they were reared. In this collaboration, we hope to learn how the chinook immune system responds to BKD infections so an effective vaccine can be developed. From a practical level, we hope to determine which hatchery practices contribute the most to transmitting BKD from fish to fish as well as what causes fish to become sick from the infection. When these practices are known, hatcheries can make adjustments to the rearing program to avoid those practices that contribute to BKD outbreaks.



Chinook salmon with BKD-induced hemorrhaging on skin.

Lake Michigan chinook salmon health assessment showing signs of BKD (necrotic areas in the kidney).



Annual reports are available at **http://www.dnr.wi.gov/org/water/fhp/fish/lakemich**, the DNR's Lake Michigan fishery web page:. They can also be obtained from Brad Eggold for all species returning to the Root River Steelhead Facility, from Paul Peeters for coho and chinook salmon returning to Besadny Facility and Strawberry Creek and from Steve Hogler for steelhead returning to the Besadny Facility.

Oconto River Habitat Improvement Project

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$7,700	$0	$0	$0
Actual Salmon Stamp Expenditures	$14,636	$1,111	N/A	N/A
Total Expenditures (all funding sources)	$26,079	$1,607	N/A	N/A

Contact: Justine Hasz, Fisheries Biologist, Peshtigo

Completed in August 2002, this project involves a partnership with Trout Unlimited, Hornberg Fly Fishers and the Oconto Sportsman Club to improve the diversity of habitat and provide holding areas for trout and salmon, as well as other fish, on the lower Oconto River. The work carried out on this 1,000-foot stretch of river (north of River Road boat landing) included placing 400 boulders in the river and excavating two islands to provide a meander in the river flow.

Nearshore Stocking of Rainbow Trout

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$5,000	$5,500	$4,042	$8,500
Actual Salmon Stamp Expenditures	$4,941	$8,989	N/A	N/A
Total Expenditures (all funding sources)	$8,805	$13,002	N/A	N/A

Contact: Steve Hogler, Fisheries Biologist, Mishicot

Over time, changes in the near-shore environment and the trout and salmon strains stocked have decreased the opportunity for anglers to catch these fish from piers and from along the shoreline of Lake Michigan. To enhance near-shore fishing opportunities, biologists decided to stock rainbow trout because rainbow trout are able to utilize all types of available forage and tolerate warmer near-shore temperatures better than salmon. With the assistance of Lake Michigan anglers at public meetings the Arlee strain was the first strain selected for stocking into Wisconsin's Lake Michigan near-shore waters. Illinois also stocks this strain into Lake

Michigan.

The purpose of this project is to identify, select, and stock a rainbow trout strain (or strains) that will improve near-shore Lake Michigan fishing opportunities. The study will continue until 2008 when a final report will be issued that evaluates the effectiveness of this program.

In the spring of 2001, 10,000 fish were stocked at six locations including Kenosha, Milwaukee, Sheboygan, Manitowoc, Algoma and Sister Bay. In 2002, a second stocking of 10,000 Arlee strain trout was accomplished at Manitowoc and Milwaukee. In 2003, a second strain of near-shore rainbow trout, Kamloops, was selected from the French River, Minnesota, area of Lake Superior. The Kettle Moraine Springs and Lakewood Hatcheries, raised, fin clipped and stocked approximately 10,100 of the Arlee and 10,300 Kamloops at each of the six near-shore Lake Michigan sites.

Results obtained from Wisconsin's Creel Survey indicate that in 2001, anglers harvested an estimated 1,324 Arlee strain rainbow trout. Harvested Arlee ranged in length from 9 to 17 inches and averaged 13 inches in length. Anglers fishing from piers or along the shoreline harvested most of the Arlee that were caught in 2001. In 2002, it was estimated that anglers harvested 1,605 Arlee with 70% of the catch from the 2002 stocking. These fish averaged 18.7 inches in length and 2.4 pounds in weight. The Arlee stocked in 2001 were also harvested, but in much lower numbers. These fish averaged 21 inches in length and weighed 4.8 pounds. Unlike 2001, the boat fishery took the majority of the harvested Arlee in 2002. Shore and pier anglers also harvested a substantial number of Arlee in 2002, but harvested less than in 2001. However, the harvest estimate and average length and weight must be viewed cautiously because of the small number of fish handled that had fin clips or that were measured and weighed.

Permanent Employee Salaries - Lake Michigan

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$73,009	$74,468	$65,772	$66,429
Actual Salmon Stamp Expenditures	$62,281	$65,772	N/A	N/A

Permanent employee salaries are for Fisheries Technicians at the Great Lakes Research Facility. They work on lake trout assessments, manage operations at the Root River Steelhead Facility, conduct surveys and evaluations, collect data, and manage databases. In addition, permanent employee salaries funded from other sources are spread across the appropriate Lake Michigan projects listed and are accounted for in the total program expenditure figures for those projects.

For more information on the Lake Michigan Fishery visit:

http://www.dnr.wi.gov/org/water/fhp/fish/lakemich

Lake Superior Evaluation and Research Activities

Brule River Lamprey Barrier Operation

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$18,620	$18,620	$17,586	$17,400
Actual Salmon Stamp Expenditures	$15,783	$20,862	N/A	N/A
Total Expenditures (all funding sources)	$28,122	$30,174	N/A	N/A

Contact: Dennis Pratt, Fisheries Biologist, Superior

The goal of this project is to efficiently operate and maintain the Middle River and maintain the Middle River and Bois Brule sea lamprey barriers and to prevent sea lampreys from reproducing in upstream areas. This project also manages the construction and operation of the Iron River sea lamprey barrier after the removal of the Orienta dam in 2002.

The sea lamprey represents the single largest threat to the Lake Superior fishery.

The sea lamprey is a parasitic species native to the Atlantic Ocean that invaded Lake Superior in the 1940s. Sea lampreys spawn and use the lake's tributary streams for reproduction and rearing. Once mature, lampreys enter the lake and begin killing 20-40 pounds of fish per sea lamprey. The Brule River sea lamprey barrier has trapped over 29,315 lampreys since 1986. The Wisconsin barriers are an integral part of the international effort to reduce the impact of sea lampreys on the Great Lakes fishery. The Brule River barrier also supports the Lake Superior fishery with time-lapse video monitoring equipment that counts salmon migrating upstream through the barrier's fish-way allowing accurate assessment of spawning runs and helping DNR personnel to improve the Lake Superior tributary management strategies.

The fall 2001 run consisted of 5,484 rainbow trout, 1,615 coho salmon, 258 chinook salmon, 5,533 brown trout, five pink salmon, three lake trout and only one non-wild brook trout. The brown trout run was a 15-year record. There were 490 sea lampreys trapped in 2002 with a total population estimate of 1,114. This is low for lampreys trapped. Salmon Stamp funds were also used to replace a malfunctioning color monitor in the time-lapsed recording system that is used to monitor sea lamprey blockage and salmonid passage. General maintenance was performed on the access roads at Middle River and Bois Brule. Repairs were also made to the Bois Brule sea lamprey barrier main face lip damaged by the spring 2001 catastrophic flood and a crack in Middle River barrier. Ascending in the fall of 2003 were 4,425 brown trout, 271 chinook salmon, 3,249 coho salmon and 7,447 steelhead. There were 1,975 sea lampreys trapped in FY 2003.

Creel Survey & Index Sampling

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$35,160	$35,160	$24,580	$24,320
Actual Salmon Stamp Expenditures	$55,662	$69,121	N/A	N/A
Total Expenditures (all funding sources)	$99,178	$99,971	N/A	N/A

Contact: Steve Schram, Lake Superior Fisheries Supervisor, Bayfield

Annual creel surveys are conducted at all major Lake Superior ports to monitor the sport harvest of salmon and trout. Creel clerks randomly survey anglers at boat landings throughout the year. When combined with information about the commercial and charter harvests, the creel data helps to estimate population size, develop stocking strategies and decide how to best manage the Lake Superior fishery. Index sampling with graded mesh gill nets during the summer monitors long term trends in the fishery. These surveys also measure the success of other Lake Superior fishery management projects, including the Brule River lamprey barrier and the lake trout rehabilitation program. The association of anadromous species to other species is also sampled throughout Wisconsin Lake Superior waters. Salmon diet data is also collected to provide a look at long-term lake-wide trends.

In 2002 creel surveys were conducted at Saxon Harbor, Washburn, Cornucopia, Port Wing and Superior. There were 40,427 angler trips that resulted in 200,555 hours spent fishing on Lake Superior. The most abundant species harvested were lake trout at 23,260; second were coho salmon at 2,917 and whitefish were third at 1,612. Splake were fourth at 1,279 and brown trout were fifth at 1,121. The average lake trout harvested was slightly over 22 inches and 83% were of native origin. Coho salmon averaged 17.3 inches and all were produced from tributaries. In 2003 creel surveys were conducted at Saxon Harbor, Washburn, Cornucopia, Port Wing and Superior. A total of 47,400 angler trips resulted in 213,830 hours spent fishing on Lake Superior. There were 17,300 lake trout harvested, 3,940 coho salmon, 1,788 chinook salmon, 1,095 whitefish and 635 brown trout. The average lake trout harvested was 22.6 inches and 82% were of native origin. Coho salmon averaged 16.6 inches and all were produced from tributaries.

The summer graded mesh assessment was conducted at 22 stations between Sand Island and Superior in 2002 and in the Apostle Islands during 2003. The 1998 lake herring year class remains strong and individuals are large enough to provide forage for larger predators. Stocked lake sturgeon continue to do well and will be maturing in 3-5 years. Burbot continue to decrease in abundance while siscowet lake trout continue to increase.

In both years coho index stations were sampled on the Little Brule, Flagg, Cranberry, Onion, Little Sioux, Whittlesey, Pine and North Fish Creek. Coho salmon recruitment remains stable except on streams where beaver dams prevent adults from reaching spawning grounds.

Lake Trout Restoration & Management

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$39,090	$39,090	$26,935	$26,650
Actual Salmon Stamp Expenditures	$72,999	$90,957	N/A	N/A
Total Expenditures (all funding sources)	$130,080	$131,552	N/A	N/A

Contact: Steve Schram, Lake Superior Fisheries Supervisor, Bayfield

Lake Superior lake trout restoration and management addresses two critical factors regulating lake trout populations: harvest levels and sea lamprey-related fish mortality. The controls on harvest include constraints on commercial and sport fishing. Lake trout populations have responded well to these regulations with increasing numbers of native lake trout caught as a percentage of total lake trout caught. Consequently stocking in the Apostle Islands area has been discontinued. In the Ashland-Bayfield area, approximately 34% of all lake trout caught in 1985 were native lake trout. By 2002, the level had risen to 92%. Sea lamprey-related fish mortality, however, still remains an obstacle to complete rehabilitation.

This project covers costs associated with the spring/fall lake trout assessments and evaluates the long-term trends in the lake trout population including distribution, abundance, growth, and mortality rates. By examining bones from the inner ear DNR fish biologists can more accurately determine the age of lake trout. This allows a more accurate analysis and helps adjust regulations and stocking strategies.

In 2002 Devils Island Shoal was sampled for the first time since the completion of the astro-turf lake trout egg-seeding experiment concluded. A total of 364 lake trout were sampled with natives comprising 97% of the catch and a relative spawner abundance of 93.3 fish/1000 ft. A spring lake trout assessment was conducted at 31 stations in the Apostle Islands and the geometric mean catch per unit effort increased for the fourth straight year.

Lake Superior Tributaries Management Plan

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$4,350	$4,145	$2,324	$2,300
Actual Salmon Stamp Expenditures	$29,219	$31,652	N/A	N/A
Total Expenditures (all funding sources)	$52,062	$45,779	N/A	N/A

Contact: Dennis Pratt, Fisheries Biologist, Superior

This project focuses on protecting, restoring and enhancing self-sustaining lake-run salmon and trout in coldwater tributaries flowing into Lake Superior. Those streams are a unique resource providing spawning and nursery areas for lake-run rainbow and brown trout, as well as coho and chinook salmon.

Ongoing work will continue on:

-categorizing each stream section on the basis of its ability to produce salmon and trout species
-identifying barriers to fish habitat development and tactics to overcome them
-developing a basin-wide watershed management plan

Brook Trout Management Plan for Wisconsin's Lake Superior Basin

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$13,000	$13,205	$0	$0
Actual Salmon Stamp Expenditures	$21,003	$10,173	N/A	N/A
Total Expenditures (all funding sources)	$21,003	$10,173	N/A	N/A

Contact: Dennis Pratt, Fisheries Biologist, Superior

Brook trout were the only known salmonid species originally inhabiting coldwater tributaries flowing into Wisconsin's Lake Superior. Early visitors reported abundant stream populations and a unique group of brook trout they called rock trout, which were caught along the rocky shoreline of the Bayfield Peninsula and seasonally in streams, when they ascended to spawn. Many different factors led to brook trout decline in the late 1800s and early 1900s. Today, brook trout populations are very small in comparison to the years prior to the late 1800s. This project has funded Wisconsin's activities on the Brook Trout Subcommittee of the Great Lakes Fishery Commission leading to the development of a lake-wide rehabilitation plan to improve brook trout abundance. During this current biennium, funds will be used to develop Wisconsin's strategies that might be implemented to attempt restoration of brook trout in Wisconsin's portion of the Lake Superior drainage.

Permanent Employee Salaries - Lake Superior

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$55,669	$57,105	$55,669	$57,105
Actual Salmon Stamp Expenditures	$52,472	$55,187	N/A	N/A

Permanent employee salaries are for a Fisheries Biologist and a Fisheries Technician on Lake Superior. The Fisheries Biologist conducts evaluations and research to support the fish stocking program for the Lake Superior watershed. The primary responsibilities of the Fisheries Technician are to conduct creel surveys and to monitor the harvest of lake trout by commercial fishers. In addition, permanent employee salaries funded from other sources are spread across the appropriate Lake Superior projects listed and are accounted for in the total program expenditure figures for those projects.

The Great Lakes salmon and trout stamp allows the DNR to continue development of the salmon and trout fisheries in Lake Michigan, Superior, and their tributaries.

Propagation Activities

Basic Hatchery Services

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$49,862	$49,862	$49,100	$63,110
Actual Salmon Stamp Expenditures	$98,033	$92,174	N/A	N/A
Total Expenditures (all funding sources)	$201,540	$209,308	N/A	N/A

Contact: Tom Desjardins, Natural Resources Operations Supervisor, Bayfield Hatchery
Randy Link, Fish Propagation Supervisor, Kettle Moraine Springs Hatchery
Mark Opgenorth, Natural Resources Operations Supervisor, Green Bay
Steve Fajfer, Natural Resources Operations Supervisor, Wild Rose Hatchery

Funds expended in this project area cover basic operating services not directly associated with fish rearing at Bayfield, Kettle Moraine Springs, Thunder River, Lake Mills and Westfield hatcheries. Expenses include facilities and grounds maintenance; operational expenses such as telephone, electricity and heat; staff travel costs; supplies; computer equipment and costs associated with conducting public educational events and tours.

General maintenance and safety upgrades were performed at all of the hatcheries. In addition, the Thunder River lower ponds were scraped and new gravel was added for more efficient production and capture as well as electrical upgrades around the pond areas. Grounds were landscaped including removal of trees for safety and aesthetic reasons. In 2003 a walk-in freezer at the Lake Mills hatchery was also repaired.

Each year approximately 100,000 Wild Rose strain brown trout are raised at the Lima Rearing Ponds for stocking in Lake Michigan.

Coldwater Production

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$475,850	$468,125	$463,280	$436,651
Actual Salmon Stamp Expenditures	$495,759	$431,936	N/A	N/A
Total Expenditures (all funding sources)	$1,013,488	$986,996	N/A	N/A

This project covers production costs associated with fish rearing at five hatcheries and two rearing stations and

is separate from basic hatchery services. Typical costs include fish food, electricity, pond and raceway maintenance and air pumps to provide increased oxygen levels and reduce the ice cover.

Bayfield Hatchery
Contact: Tom Desjardins, Natural Resources Operations Supervisor, Bayfield Hatchery

Salmon Stamp funds cover all of the hatchery's spawning, hatching, rearing and stocking costs. In 2002-03 180,000 Nipigon brook trout eggs were started and the resulting fingerlings transferred to the Brule River Rearing Station along with the fingerlings from 130,000 steelhead eggs and 55,000 seeforellen brown trout fingerlings. In addition 60,000 Soda Lake brown trout eggs were started and fingerlings transferred to Brule. Salmon Stamp funds allowed stocking approximately 675,000 small chinook fingerlings, 130,000 yearling coho salmon, 154,000 large coho fingerlings, and over 215,000 large lake trout fingerlings. In addition 37,500 small rainbow trout fingerlings and over 280,000 large splake fingerlings were stocked. Bayfield Hatchery personnel also raised 20,000 lake trout for transfer to the Green Lake co-op pond. The collection of eggs in the fall of 2002 fell slightly short of program goals for lake trout and splake and was most likely due to timing. Eyed chinook and coho salmon eggs along with seeforellen brown trout eggs were transferred in from other facilities.

The predator barrier (roof) protects steelhead raceways at Kettle Moraine Springs Fish Hatchery and has reduced losses by several thousand over the years.

Kettle Moraine Springs Fish Hatchery
Contact: Randy Link, Natural Resources Operations Supervisor, Kettle Moraine Springs Hatchery

Kettle Moraine Springs Hatchery produces three strains of steelhead - Skamania, Chambers Creek, and Ganaraska. Great Lakes Salmon Stamp funds also pay for the incubation and hatching of coho eggs to be reared at Lake Mills Hatchery and the Bayfield Hatchery. Over 200,000 fish per year are clipped before stocking into Lake Michigan broodstock recovery streams. Adult fish are collected from migrations up these tributaries and spawned on site or held at the hatchery until they are ripe with spawn.

Collection activities in 2002-03 included 2.7 million coho salmon eggs, 500,000 Chambers Creek steelhead eggs, 500,000 Ganaraska steelhead eggs and 300+ Skamania steelhead brood fish. In 2002 Salmon Stamp funds were used to incubate, hatch, rear and transfer over 130,000 large Chambers Creek fingerlings, approximately 320,000 large Ganaraska fingerlings, and over 75,000 Skamania. Over 70,000 small chinook salmon fingerlings and 85,000 brook trout were also raised. Totals for 2003 included 130,000 large Chambers Creek fingerlings, approximately 150,000 large Ganaraska fingerlings, 61,000 Kamloop fingerlings, and over 170,000 Skamania fingerlings. Eyed eggs were transferred for a fish health study monitoring the incidence of kidney disease. The hatchery also collected, held and spawned 400 Skamania strain steelhead broodstock along with holding and spawning 200 early run coho salmon broodstock. In 2003 40,000 Arlee strain of rainbow trout were hatched and reared to small fingerling size and transferred to the Lakewood Hatchery.

Lake Mills State Fish Hatchery
Contact: Robert Fahey, Natural Resources Operations Supervisor, Lake Mills Hatchery

Salmon and Trout Stamp revenue supports the coldwater rearing program for coho salmon at the Lake Mills Hatchery. Prior to each new coho salmon rearing cycle all rearing units and equipment are disinfected. Fish health and growth are monitored with the assistance of the fish health specialist. Water quality parameters are monitored daily to ensure fish health, growth and survival. Additional uses for the funding include aerator and aerator parts, sump pumps, electrical upgrades to raceways and rearing house for safety purposes and conversion of hatchery backup generator to a propane fuel source. During 2002 approximately 102,000 large coho fingerlings and 120,000 yearling coho salmon were stocked. Totals for 2003 were 117,000 large coho fingerlings and 150,000 yearling coho salmon stocked.

Langlade Hatchery
Contact: Mark Opgenorth, Natural Resources Operations Supervisor, Green Bay

The Langlade State Fish Rearing Station rears and stocks brown trout fingerlings and yearlings for release in Lake Michigan. Each spring, Langlade receives small fingerlings from the St. Croix Fish Hatchery and raises them until they are sufficiently large enough for release in Lake Michigan. Since fish have been vaccinated, less than one percent are lost to disease each year. In 2002 51,500 large brown trout fingerlings and over 107,000 yearling brown trout were stocked. The hatchery also shipped over 23,000 brook trout fingerlings and approximately 108,000 brook trout yearlings. The hatchery shipped approximately 38,000 large brown trout fingerlings and over 107,000 yearling brown trout in 2003. The hatchery also shipped in 2003 over 27,000 brook trout fingerlings and approximately 51,000 brook trout yearlings.

Thunder River Hatchery
Contact: Mark Opgenorth, Natural Resources Operations Supervisor, Green Bay

Each year the Thunder River Rearing Station raises brown trout for stocking in Lake Michigan and Green Bay. The fish are hatched at the Wild Rose Fish Hatchery and transported to Thunder River. The station ponds are cleaned and disinfected annually. Fish are fed, sorted and assessment made of their daily growth. Additional salt treatments are helping to maintain fish health and quality at stocking. In 2002 over 214,000 large brown trout fingerlings were reared for stocking along with 65,000 coho salmon yearlings. Totals for 2003 included over 221,000 large brown trout fingerlings and over 50,000 coho salmon yearlings. Failing ponds in early 2003 resulted in lower than anticipated production levels. A distribution truck tank was upgraded to ensure good fish health was maintained from harvest to stocking.

Westfield Hatchery
Contact: Steve Fajfer, Natural Resources Operations Supervisor, Wild Rose

This project funds the annual hatching and rearing of chinook fingerlings at the Westfield Fish Hatchery and oversees the lake trout and seeforellen brown trout raised at the Green Lake co-op pond. In addition, the hatchery rears coho salmon hatched from eggs at the Lake Mills Hatchery. In 2002 Salmon Stamp funds covered the costs associated with rearing of approximately 430,000 small chinook fingerlings and over 44,000 yearling coho salmon. In 2003 over 572,000 chinook salmon fingerlings and approximately 58,000 yearling coho salmon were shipped

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Electrofishing for brown trout used as brood stock at the Wild Rose Fish Hatchery.

Wild Rose Hatchery
Contact: Steve Fajfer, Natural Resources Operations Supervisor, Wild Rose

The Wild Rose Hatchery is the DNR's largest coldwater fish hatchery for yearling brown trout and chinook salmon for stocking along the Lake Michigan shore. This project also funds the collection of fertilized eggs from wild seeforellen brown trout captured in the Menomonee, Kewaunee and Root Rivers. The Wild Rose Hatchery reared the strain of brown trout that twice broke the record in 1996. In 2002 over 700,000 chinook salmon fingerlings were stocked. In addition, approximately 32,000 seeforellen brown trout fingerlings and over 314,000 seeforellen brown trout yearlings were stocked. The Wild Rose strain of brown trout stocked included 1,400 adult broodstock, approximately 280,000 large fingerlings and approximately 62,000 yearling fish. Totals for 2003 included over 545,000 chinook salmon fingerlings stocked, 14,000 seeforellen brown trout fingerlings and over 326,000 seeforellen brown trout yearlings. The Wild Rose strain of brown trout stocked included over 200 adult broodstock, approximately 285,000 large fingerlings and approximately 68,000 yearling fish.

Coldwater Distribution

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$5,332	$5,332	$4,407	$4,360
Actual Salmon Stamp Expenditures	$10,379	$12,075	N/A	N/A
Total Expenditures (all funding sources)	$21,338	$27,592	N/A	N/A

Contact: Robert Fahey, Natural Resources Operations Supervisor, Lake Mills
(regarding Lake Mills Hatchery)
Mark Opgenorth, Natural Resources Operations Supervisor, Green Bay
(regarding Thunder River Rearing Hatchery)
Steve Fajfer, Natural Resources Operations Supervisor, Wild Rose
(regarding Westfield Hatchery)

This cost center provides Salmon & Trout Stamp funds required to inventory, seine weigh and load fish for delivery to designated sites. It also covers disinfecting equipment and routine distribution equipment maintenance.

Mass stocking of yearlings at numerous Lake Michigan locations is an economical method of stocking salmon and trout

Lake Mills State Fish Hatchery

Salmon Stamp funds were used to erect an improved predator barrier around the raceway and pond rearing area, purchase a pond harvest seine and chemicals to control aquatic vegetation in the over wintering coho salmon pond. During 2002 over 102,000 large coho salmon fingerlings and 120,000 yearling coho were stocked. In 2003 over 117,000 large coho fingerlings were stocked in Lake Michigan and the Pike, Kewaunee and Root Rivers and approximately 150,000 yearlings were stocked in the Kewaunee River and in the waters off Lake Michigan in Ozaukee and Kenosha counties. In 2002 an additional 175,000 coho fingerlings were transferred to other DNR rearing facilities and in 2003 187,000.

Thunder River Hatchery

In 2002 the hatchery successfully reared approximately 65,000 coho salmon with some shortfalls due to winter mortality. Brown trout rearing was more successful with minor mortality that allowed stocking approximately 220,000 healthy fish. In 2003 all fish reared were distributed in excellent shape and disease-free - 200,000 brown trout to Lakes Michigan and Superior as well as 50,000 coho salmon.

Westfield Hatchery

This project covers harvesting and loading of over 430,000 chinook in fiscal 2002 and over 570,000 the next year. There were approximately 45,000 coho salmon shipped in fiscal 2002 and almost 58,000 in 2003.

Operate Anadromous Fisheries Facilities

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$125,000	$112,776	$120,641	$128,000
Actual Salmon Stamp Expenditures	$105,127	$87,117	N/A	N/A
Total Expenditures (all funding sources)	$216,125	$199,066	N/A	N/A

Contact: Mark Opgenorth, Natural Resources Operations Supervisor, Green Bay
(regarding Besadny Anadromous Fisheries Facility)
Richard Rebicek, Natural Resources Operations Supervisor, Eagle
(regarding Root River Steelhead Facility)

At the Root River Steelhead Facility the general public can view fish returning to spawn through ground level windows as they swim up the last series of steps.

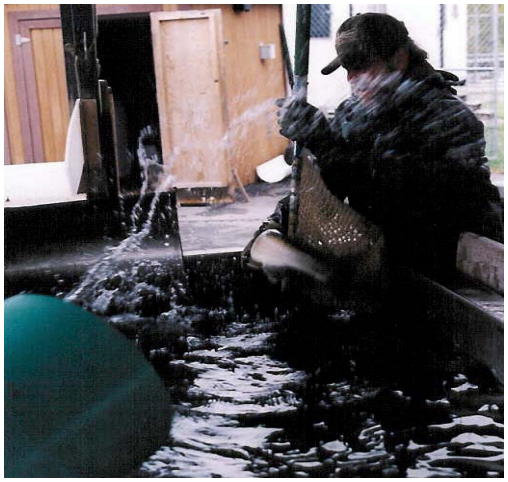
The Besadny Anadromous Fisheries Facility, the Root River Steelhead Facility, and the Strawberry Creek Weir are key to Wisconsin's salmon and trout stocking programs. Salmon Stamp funds are used to collect broodstock and eggs for fertilization, as well as maintain/operate the facilities. Also covered by the funding is public education and tours.

Besadny Anadromous Fisheries Facility

Each year approximately 3 1/2 million eggs are collected from spawning adult anadromous trout and salmon. Steelhead are trapped in late spring and summer and in the fall chinook salmon. The weir at Strawberry Creek also collects chinook salmon eggs. The Besadny Facility allows the general public to safely observe at a very close distance the harvesting of eggs and other related spawning activities. There are guided as well as self-guided tours available year round. In 2002 record numbers of chinook salmon returned to the Besadny Facility with slightly over 6,200 harvested. However, in 2003 low water was a problem and approximately 1,200 chinook were recovered.

Root River Steelhead Facility

Funding from the Salmon & Trout Stamp is used to maintain and operate the Root River Steelhead Facility in Racine from mid February to early May and mid July to mid November. The Root River facility traps adult trout and salmon for collection and egg fertilization. The weir also captures broodfish for use at the Kettle Moraine Springs Hatchery. In the fall of 2002 a record number of fish were handled at the Root River Steelhead Facility including 10,439 chinook salmon, 2,548 coho salmon, 1,361 steelhead and 294 brown trout. Over 90% of these fish were processed and passed upstream of the facility. Over 30 educational/informational tours were conducted. In 2003 DNR personnel coordinated the collection of 250+ skamania steelhead broodstock; 560,000 Chambers and Ganaraska steelhead eggs; and 848,000 coho egg takes for the statewide propagation program. DNR personnel also assisted Fish Health Specialist with spawning chinook salmon as part of a 3-year study of bacterial kidney disease. The study in conjunction with the Western Fisheries Research Center in Seattle, WA will help DNR personnel better understand the hatchery conditions that induce BKD and ultimately prevent catastrophic fish mortality.



Once DNR staff have harvested sufficient steelhead eggs at the Root River facility, the remaining returning fish are passed upriver allowing anglers the opportunity to catch this popular sport fish.

Strawberry Creek Weir

This facility in Door County is the primary chinook salmon spawning facility in Wisconsin. In recent years, low natural flow rates at the facility have required the installation of a pump and pipeline to supply water from the Sturgeon Bay ship canal to the facility. Salmon Stamp funds have supported the installation and maintenance of this pumping system.

Bayfield Hatchery Renovation

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$41,350	$7,500	$4,547	$4,500
Actual Salmon Stamp Expenditures	$72,058	$55,467	N/A	N/A
Total Expenditures (all funding sources)	$72,058	$55,467	N/A	N/A

Contact: Tom Desjardins, Natural Resources Operations Supervisor, Bayfield Hatchery

Funding includes general maintenance, upkeep of hatchery facilities and funding a generator over the biennium. In FY 2002 electrical repairs included replacing raceway lighting, a breaker box and undersized wiring. During the spring of 2003 the lake water pipeline was repaired. In June 2003 work was completed on a required 3-year inspection of the facility's boilers. Several pumps have been replaced/repaired as needed. Improvement to the chinook spawning area had to be deferred as additional staff time was required for the transfer of eggs from other facilities to make up for the poor numbers of returning fish. Funds were also used for repair of a walk-in freezer. Exterior of main hatchery and other buildings was painted over the summers of 2002 and 2003.

Nevin Hatchery Maintenance

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$14,150	$0	$0	$0
Actual Salmon Stamp Expenditures	$6,651	$0	N/A	N/A
Total Expenditures (all funding sources)	$6,651	$0	N/A	N/A

Contact: John Komassa, Fish Propagation Supervisor, Fitchburg

Salmon & Trout Stamp funds support maintenance activity required to raise the Wild Rose brown trout strain. In 2002 and 2003 a chain link fence was erected to protect an artesian well. Equipment was installed on the main hatchery building to prevent ice build-ups in the gutters and roof. A roller drum screen that keeps the outlying rearing pond at the Lima, Rock County site free of debris, prevents flooding and fish from escaping was purchased to replace a damaged unit.

Wild Rose Fish Hatchery Water Supply Compliance & Renovation Project

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$0	$0	$600,000*	$600,000*
Actual Salmon Stamp Expenditures	$0	$0	N/A	N/A
Total Expenditures (all funding sources)	$0	$0	N/A	N/A

Contact: Alfred Kaas, Statewide Fish Propagation Coordinator, Madison

This project will renovate Wisconsin's largest coldwater fish hatchery to meet current environmental laws and reverse declining fish production due to failing wells and infrastructure. The century-old hatchery and its ability to cost efficiently produce brown trout and chinook salmon is a major key to Wisconsin's $2.3 billion sport fishery. The estimated cost for Phase 1 is $13.7 million and is part of the total hatchery renovation cost of $24.2 million (the second phase is for cool water fish species). The groundwater supply system will be upgraded to meet environmental standards and also to improve fish health. Fish rearing units will be replaced to improve fish health, production rates, and assure species remain separate. The project would also preserve a portion of the historic hatchery built by the Civilian Conservation Corps in the 1930s as a Visitor Center.

* This contribution of Salmon Stamp revenues to the renovation of the Wild Rose hatchery is possible because of the increased Salmon Stamp fee in 2004. Significant additional funding will be needed to complete the project.

Great Lakes Aquatic Education

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$15,000	$15,000	$0	$0
Actual Salmon Stamp Expenditures	$1,810	$8,621	N/A	N/A
Total Expenditures (all funding sources)	$3,224	$12,468	N/A	N/A

Contact: Mark Opgenorth, Natural Resources Operations Supervisor, Green Bay

The C. D. "Buzz" Besadny Anadromous Fisheries Facility at Kewaunee is designed to promote all of Wisconsin's Great Lakes Fisheries programs and is the central location for educational tours for over 100,000 annual visitors. Funds are used to provide tours to school groups, sports clubs/groups, as well as other interested public and inter-disciplinary groups. During 2002 there were 46 scheduled public tours with 2,300 individuals experiencing the facility. In 2002, tours at the Besadny facility were conducted for over 50 school age groups and 28 private adult groups. During the 2003 Chinook run from mid September - October approximately 8,000 people experienced the Besadny Facility with 1,300 people participating in guided tours. Funding for this project was cut for fiscal years 2004 and 2005 due to overall budget restrictions.

Permanent Employee Salaries - Propagation Activities

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$31,047	$31,668	$30,801	$31,109
Actual Salmon Stamp Expenditures	$29,164	$30,801	N/A	N/A

Permanent employee salaries are for one Fisheries Technician at the Kettle Moraine Springs Hatchery whose primary duties are incubating coho eggs and propagating and rearing steelhead. In addition, permanent employee salaries funded from other sources are spread across the appropriate propagation projects listed and are accounted for in the total program expenditure figures for those projects.

Program Administration

Administer the Salmon & Trout Stamp Program

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$6,000	$6,000	$2,500	$2,500
Actual Salmon Stamp Expenditures	$1,108	$1,389	N/A	N/A
Total Expenditures (all funding sources)	$1,974	$2,009	N/A	N/A

Contact: Bill Horns, Great Lakes Fisheries Specialist, Madison

This project covers costs associated with the judging and printing of the Great Lakes Salmon and Trout Stamp.

Salmon Stamp Expenditure Report & Plan

Year	FY 02	FY 03	FY 04	FY 05
Budgeted Salmon Stamp Expenditures	$7,200	$0	$3,500	$0
Actual Salmon Stamp Expenditures	$1,953	$72	N/A	N/A
Total Expenditures (all funding sources)	$3,480	$104	N/A	N/A

Contact: Bill Horns, Great Lakes Fisheries Specialist, Madison

These expenses cover the costs of limited term employees to perform research, gather data, and write and assemble this Salmon Stamp Expenditure Report.

Permanent Employee Salaries

None.

Program Background

Creation of the Salmon and Trout Stamp Program

In the early 1980s, the loss of federal funding for non-native trout and salmon stocking prompted the creation of Wisconsin's Great Lakes Salmon and Trout Stamp Program. The Wisconsin Department of Natural Resources (DNR) faced the prospect of large reductions in the Great Lakes stocking program, including the elimination of coho salmon stocking. Concerned Great Lakes anglers initiated and promoted the legislation that created the Great Lakes Salmon and Trout Stamp (Salmon Stamp). Since 1982, every angler wishing to fish for salmon or trout in the Wisconsin waters of the Great Lakes must purchase a Great Lakes Salmon and Trout Stamp. Revenues from the sale of Salmon Stamps help support the DNR trout and salmon rearing and stocking program for the Great Lakes.

Guidelines for the use of Great Lakes Salmon & Trout Stamp revenues[1]

Wisconsin state statute 29.191(5)(e) states "The Department shall expend the receipts from the sale of Great Lakes Trout and Salmon Stamps to supplement and enhance the existing trout and salmon rearing and stocking program for outlying waters and to administer this section.[2]" These statutes clearly define that expenditures are (1) species limited to salmon and trout only, (2) geographically limited to the Wisconsin waters of Lakes Michigan and Superior and their tributaries, and (3) program limited to the rearing and stocking program. Projects funded by stamp monies must meet these three requirements or be related to the administration of these monies.

Species requirement

Salmon and Trout Stamp revenues may only be used for projects that pertain to salmonid species. These species include Pacific salmon (coho, chinook), trout (rainbow [steelhead], brown) and chars (brook trout, splake and lake trout). Stamp money may not be used for projects specifically directed toward warm or cool water fishes such as percids, esocids, and centrarchids.

Geographical requirement

Projects that use stamp revenues must be geographically focused on the Great Lakes watershed. Specifically, the geographical scope of these projects may include tributaries accessible to Great Lakes salmon and trout, as well as Lakes Michigan and Superior themselves. Projects that pertain to trout waters other than the Great Lakes (e.g., Great Lakes tributaries inaccessible to Great Lakes salmon and trout, inland trout streams and lakes) may not use Salmon Stamp money.

St. Croix Falls Fish Hatchery personnel inspect and monitor the incubation process.

Program requirement

Projects funded by Salmon and Trout Stamp money must also relate specifically to the Great Lakes stocking program. The stocking program includes a variety of activities and utilizes physical facilities that require equipment, maintenance and labor.

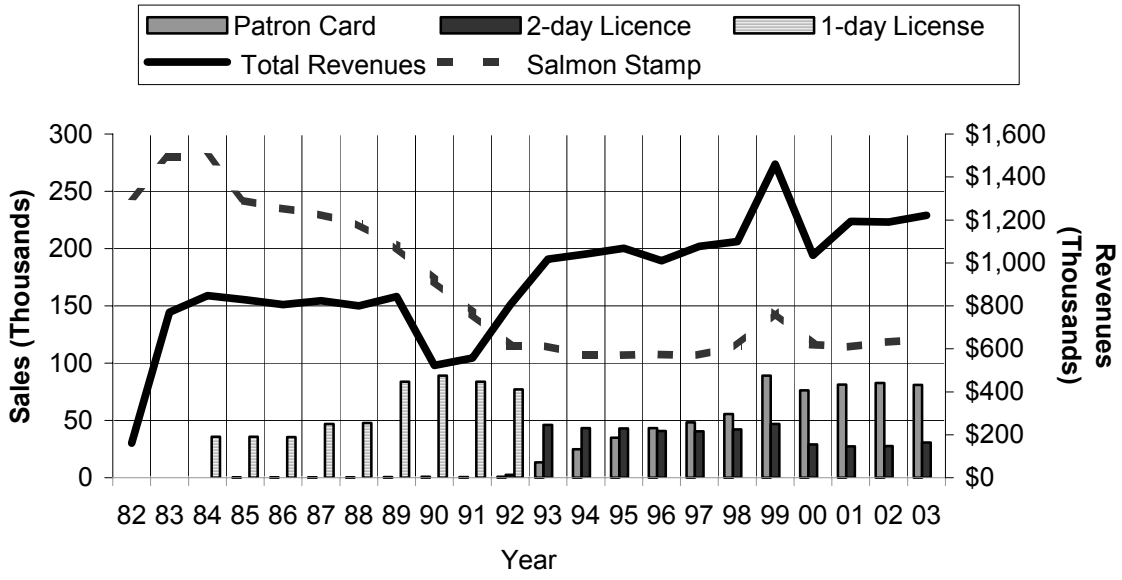
Activities within the stocking program may be categorized as evaluation and research activities as well as propagation activities (including facility developments).

Evaluation and research activities serve as a measure of success for the stocking program. Examples of evaluation and monitoring activities include lake-wide creel surveys, species and strain evaluations (tagging and marking studies), development of management plans (annual stocking plans, species plans, long-term plans) and annual propagation planning. Experimental activities test alternative methods of propagation and evaluation including:

- evaluation of automatic feeders
- innovative hatchery incubators
- alternative fish foods
- artificial reef substrates for egg incubation
- new creel survey methods
- new fish marking methods
- gamete preservation techniques

Propagation activities include hatchery operation costs (electricity, labor, fish food, waders, etc.), acquisition of fertilized eggs, egg incubation, fish rearing and transportation of fish to stocking sites. Propagation activities also include the physical facilities that support the stocking program. Specifically, these facilities include raceways, rearing ponds, hatchery grounds, generators, pumps, water supply systems, vehicles, aerators, automatic fish feeders, land, engineering plans, and incubators. Salmon and Trout Stamp revenues may be used for maintenance, repair, or purchase of these facilities in order to fulfill the needs of the stocking program.

License Sales Contributions
Great Lakes Salmon & Trout Stamp Account
Fiscal Years 1982 - 2003



Sources of revenue for the Salmon Stamp Account

The Salmon Stamp account pays for slightly more than 50% of the total Great Lakes trout and salmon program. Fishing license fees, general tax revenue, federal funding and donations also support the program.

All receipts from the sale of Salmon Stamps are placed in the DNR Fish & Wildlife Segregated Account and reserved for eligible Salmon Stamp activities. These funds are referred to as the Salmon Stamp account. Interest earned on these funds accrue to the Fish & Wildlife Segregated Account. Some revenues from the sales of patron licenses, two-day sport fishing licenses and collector stamps also contribute to the account. The price of each license to the consumer includes the base price of the license plus a fee that goes to the vendor. The vendor's fee is $0.75 for the two-day license and the patron card; it is $0.25 for the Salmon Stamp. Calculations and references in this report exclude vendor's fees.

Funding for the Salmon Stamp account has changed over time. It was established in 1982 with a price of $3.00. In 1984, the Wisconsin State Legislature approved a $6.00 one-day fishing license for the Great Lakes. This inexpensive license allowed anglers to spend one day fishing for trout and salmon on the Great Lakes without being required to buy an annual Great Lakes Salmon and Trout Stamp. To prevent a sharp reduction in funding for the salmon and trout program, one-half of the revenues from the license supported Great Lakes salmon and trout projects.

In 1988, the Legislature changed the one-day license by allowing inland fishing. Revenues from the new one-day license were split among Great Lakes salmon projects, inland trout habitat projects, and general fisheries work. In 1992, the Legislature replaced the one-day license with a $7.25 two-day license, valid for the Great Lakes only, and in 1997, the two-day license fee was increased to $9.25. One-half of those revenues are placed in the Salmon Stamp account. Also in 1992, the Salmon Stamp fee was increased from $3.00 to $7.00. The fee will be increased to $10.00 in 2004.

The Salmon Stamp account also receives $1.83 from every Patron License sold. The current Patron License allocation formula assumes that half of all patron license holders fish Wisconsin's Great Lakes for salmon and trout. Patron license revenue not deposited to dedicated stamp accounts is deposited to the larger fish and wildlife account and spent for a wide variety of conservation purposes—including enhancement of salmon rearing and stocking programs. Collectors can purchase souvenir Salmon Stamps from previous years. All revenues from these sales contribute to the Salmon Stamp account.

Sea lamprey wounds still remain one of the single largest deterrents to healthy great lakes salmon and trout populations.

Footnotes

A six-year plan encompassing planned expenditures for use of Salmon Stamp sale revenues in the years 1983-88 was published in 1983[5]. Several summaries of expenditures of Salmon Stamp sale revenues have been published. The reports summarize fiscal years 1983-84[6], 1985-86[7], 1987-92[8], 1993-94[9], 1995-97[10], 1996-99[11],1998-2001[12] and 2000-03[13].

[1] *Excerpted from* Krueger, C. C. 1983. Expenditure Plan for Great Lakes Salmon and Trout Stamp Revenues. Admin. Report No. 18. Bureau of Fisheries Management, Department of Natural Resources, Madison, Wisconsin.

[2] Wisconsin Statues and Annotations 1999-2000 (45th Edition). State of Wisconsin, Madison WI.

[3] Wisconsin Department of Natural Resources. 1988. Lake Michigan Steelhead Fishery Management Plan. Admin. Report No. 29. Bureau of Fisheries Management, Department of Natural Resources, Madison, Wisconsin.

[4] Wisconsin Department of Natural Resources. 1999. Lake Michigan Steelhead Fisheries Management Plan Admin. Report No. 44. Bureau of Fisheries Management, Department of Natural Resources, Madison Wisconsin.

[5] Krueger, C. C. 1983. Expenditure Plan for Great Lakes Salmon and Trout Stamp Revenues, 1983-1988. Admin. Report No. 18. Bureau of Fisheries Management, Department of Natural Resources, Madison, Wisconsin.

[6] Hansen, M. J. 1984. Expenditures of Great Lakes Salmon and Trout Stamp Revenues, 1983-1984. Admin. Report No. 22. Bureau of Fisheries Management, Department of Natural Resources, Madison, Wisconsin.

[7] Welch, D. 1987. Expenditures of Great Lakes Salmon and Trout Stamp Revenues, 1985-1986. Admin. Report No. 26. Bureau of Fisheries Management, Department of Natural Resources, Madison, Wisconsin.

[8] Horns, W. H., Zilker, D. A., & Perkins, L. November 1993. Expenditures of Great Lakes Trout and Salmon Revenues 1987-1992. Admin. Report No. 36. Bureau of Fisheries Management, Department of Natural Resources, Madison, Wisconsin.

[9] Lentz, D. R. 1994. Expenditures of Great Lakes Trout and Salmon Stamp Revenues 1993-1994. Admin. Report No. 37. Bureau of Fisheries Management, Department of Natural Resources, Madison, Wisconsin.

[10] Oldenburg, P. S. 1996. Expenditures of Great Lakes Salmon and Trout Stamp Revenues, Fiscal Years 1995-1997. Admin. Report No. 40. Bureau of Fisheries Management and Habitat Protection, Department of Natural Resources, Madison, Wisconsin.

[11] Keim, S. 1998. Expenditures of Great Lakes Salmon and Trout Stamp Revenues, Fiscal Years 1996-1999. Admin. Report No. 42. Bureau of Fisheries Management and Habitat Protection, Department of Natural Resources, Madison, Wisconsin.

[12] Topel, B. 2000. Expenditures of Great Lakes Salmon and Trout Stamp Revenues, Fiscal Years 1998-2001. Admin. Report No. 45. Bureau of Fisheries Management and Habitat Protection, Department of Natural Resources, Madison, Wisconsin

[13] Topel, B. 2002 Expenditures of Great Lakes Salmon and Trout Stamp Revenues, Fiscal Years 2000-03. Admin. Report No. 51. Bureau of Fisheries Management and Habitat Protection, Department of Natural Resources, Madison, Wisconsin.

Contact List

If you have any questions concerning this report, please contact the personnel listed (by phone or e-mail) with the project you're interested in.

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It is important to the Wisconsin Department of Natural Resources that you find this report useful. To better meet this goal, direct your suggestions for improving this report to

Bill Horns	DNR Central Office, Madison; (608) 266-8782; William.Horns@dnr.state.wi.us

For more information on Great Lakes fishing and many other subjects, visit the DNR Web site.

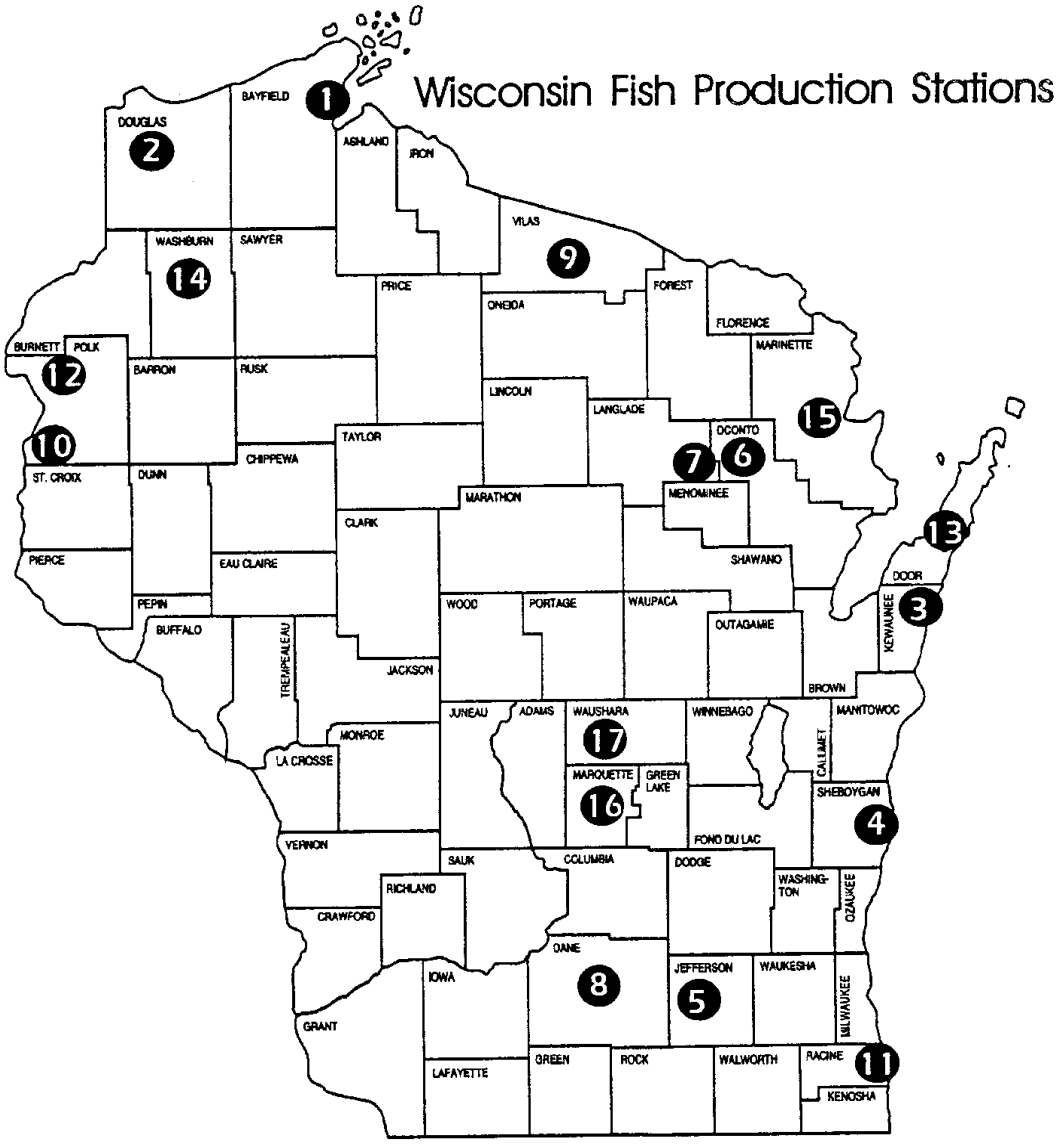
http://www.dnr.wi.gov

Find the ***Fish Wisconsin*** page by clicking on

*"**Outdoor Recreation**"* and then ***"Fishing***"

Lake Michigan specific information is available at

http://www.dnr.wi.gov/org/water/fhp/fish/lakemich



	Facilities	Phone	Type of Fish Production
1	Bayfield	(715) 779-4021	Coldwater
2	Brule	(715) 372-4820	Coldwater
3	Besadny Spawning Facility	(920) 388-1025	Coldwater
4	Kettle Moraine Springs	(920) 528-8825	Coldwater
5	Lake Mills	(920) 648-8012	Coldwater, Cool/warm water
6	Lakewood	(715) 276-6066	Coldwater
7	Langlade	(715) 882-8757	Coldwater
8	Nevin	(608) 275-3246	Coldwater
9	Oehmcke	(715) 356-5211	Cool/warm water
10	Osceola	(715) 294-2525	Coldwater
11	Root River Spawning Facility	(414) 638-0134	Coldwater
12	St Croix Falls	(715) 483-3535	Coldwater
13	Strawberry Creek Weir	(920) 746-2860	Coldwater
14	Thompson	(715) 635-4147	Cool/warm water
15	Thunder River	(715) 757-3541	Coldwater
16	Westfield	(608) 296-2343	Coldwater
17	Wild Rose	(920) 622-3527	Coldwater, Cool/warm water